Notice of Allowability	Application No.	Applicant(s)	
	09/147,362	CHENEBAUX ET AL.	
	Examiner	Art Unit	
	Jeffrey S. Parkin, Ph.D.	1648	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment filed 08 June, 2005*.

2. ☒ The allowed claim(s) is/are *77-87, renumbered 1-11, respectively*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Jeffrey S. Parkin, Ph.D.
Primary Examiner
Art Unit: 1648

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

Claims 1-76 (cancelled)

77 (currently amended): Synthetic peptides in linear form, or cyclized by means of inter-cysteine disulphide bridges, having the general formula (I):

Δ-Z-Trp Gly Cys (residues 5 to 7 of SEQ ID NO: 1)-Θ-Cys Tyr Thr Ser (residues 13 to 16 of SEQ ID NO: 1)-Ω (I)

wherein:

-Δ is selected from the group consisting of a biotinyl radical, a biocytinyl radical, a hydrogen atom, an acetyl (CH_3CO-) radical, an aliphatic chain which may contain one or two thiol, an aldehyde functional group and an amine functional group,

- Z is a peptide sequence selected from the group consisting of:

Leu Leu Ser Leu (residues 1 to 4 of SEQ ID NO: 2)

Leu Leu Ser Ser (residues 1 to 4 of SEQ ID NO: 3),

Leu Leu Asn Ser (residues 1 to 4 of SEQ ID NO: 6),

Arg Leu Asn Ser (residues 1 to 4 of SEQ ID NO: 16),

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ser (residues 1 to 14 of SEQ ID NO: 11),

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asp Leu (residues 1 to 14 of SEQ ID NO: 13),

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ile (residues 1 to 14 of SEQ ID NO: 12),

Leu Asn Gln Gln Arg Leu Leu Asn Ser (residues 1 to 9 of SEQ ID NO: 14), and

Arg Ala Leu Glu Thr Leu Leu Asn Gln Gln Arg Leu Leu Asn Ser (residues 1 to 15 of SEQ ID NO: 15),

- Θ is a peptide sequence selected from the group consisting of:

Arg Gly Arg Leu Val (residues 8 to 12 of SEQ ID NO: 2),

Arg Gly Lys Leu Ile (SEQ ID NO: 17),

Arg Gly Lys Leu Val (SEQ ID NO: 18), and

Lys Gly Arg Leu Val (residues 8 to 12 of SEQ ID NO: 3),

- Ω, attached to the -CO- group of Ser, is selected from the group consisting of:

a hydroxyl group and

a peptide sequence of formula

Val – Ψ,

Val Arg Trp Asn Glu Thr-Ψ(residues 27-32 of SEQ ID NO: 11),

Val Gln Trp Asn Glu Thr-Ψ (residues 27 to 32 of SEQ ID NO: 1), and

Val Gln Trp Asn Ser Thr-Ψ (residues 27 to 32 of SEQ ID NO: 4),

wherein Ψ, attached to the -CO- residue of Val or Thr, is selected from the group consisting of a OH group, a NH_2 group, and an alkoxy radical comprising from 1 to 6 carbon atoms.

2 7/8 (previously presented): Synthetic peptides of formula (I) according to claim 7/1 wherein Δ represents an aliphatic chain, said aliphatic chain being selected from the group consisting of an alkyl chain of 1 to 6 carbon atoms, an alkenyl chain of 2 to 6 carbon atoms, and an aminoalkylcarbonyl chain of 2 to 6 carbon atoms.

3 7/8 (previously presented): Synthetic peptides of formula (I) according to claim 7/1 including one of the following sequences:

LLSLWGCRGRLVCYTSVQWNET

or

Leu Leu Ser Leu Trp Gly Cys Arg Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn
1 5 10 15 20
Glu Thr (SEQ ID NO: 2),
22

LLSSWGCKGRLVCYTSVQWNET

or

Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn
1 5 10 15 20
Glu Thr (SEQ ID NO: 3),
22

LLSSWGCKGRLVCYTSVQWNST

or

Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn
1 5 10 15 20
Ser Thr (SEQ ID NO: 4),
22

LLQSWGCKGRLVCYTSVQWNST

or

Leu Leu Gln Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn
1 5 10 15 20
Ser Thr (SEQ ID NO: 5),
22

LLSSWGCRGRLVCYTSVQWNET

or

Leu Leu Ser Ser Trp Gly Cys Arg Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn
1 5 10 15 20
Glu Thr (SEQ ID NO: 8),
22

LLSSWGCKGRLVCYTS

or

Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser (SEQ ID NO: 9),
1 5 10 15

LLNSWGCKGRLVCYTS

or

Leu Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser (SEQ ID NO: 10),
1 5 10 15

ALETLLQNQQLLNSWGCRGRLVCYTSVRWNET

or

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ser Trp Gly Cys Arg Gly
1 5 10 15
Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr (SEQ ID NO: 11),
20 25 30

ALETLLQNQQLLNIWGCRGRLVCYTSVRWNET

or

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ile Trp Gly Cys Arg Gly
1 5 10 15
Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr (SEQ ID NO: 12),
20 25 30

ALETLLQNQQLLDLWGCRGRLVCYTSVRWNET

or

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asp Leu Trp Gly Cys Arg Gly
1 5 10 15
Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr (SEQ ID NO: 13),
20 25 30

LNQQRLLNSWGCKGRLVCYTSV

or

Leu Asn Gln Gln Arg Leu Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr
1 5 10 15
Thr Ser Val (SEQ ID NO: 14),
20

RALETLLNQQRLLNSWGCKGRLVCYTSV

or

Arg Ala Leu Glu Thr Leu Leu Asn Gln Gln Arg Leu Leu Asn Ser Trp Gly Cys Lys
1 5 10 15
Gly Arg Leu Val Cys Tyr Thr Ser Val (SEQ ID NO: 15),
20 25

RLNSWGCKGRLVCYTSV

or

Arg Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val (SEQ ID NO: 16).
1 5 10 15

4 ~~80~~ (previously presented): Composition containing at least one synthetic peptide of formula (I) according to claim ~~77~~ (, said peptide being freeze-dried or diluted in water.

5 ~~81~~ (previously presented): Composition according to claim ~~80~~ 4 containing, as the at least one synthetic peptide of formula (I), SEQ ID NO: 3 and SEQ ID NO: 1.

6 ~~82~~ (previously presented): Composition containing at least one synthetic peptide of formula (I) according to claim ~~77~~ (and at least one group O HIV-1 recombinant peptide.

7 ~~83~~ (previously presented): Composition containing at least one synthetic peptide of formula (I) according to claim ~~77~~ \, and at least one HIV-1 and/or HIV-2 recombinant or synthetic peptide.

8 84 (previously presented): Immunoassay method for detecting a group O HIV-1 infection comprising the steps of a) obtaining a sample from a patient likely to contain anti-group O HIV-1 antibodies:

b) contacting at least one synthetic peptide of formula (I) according to claim 71, detectably labeled, with said sample;

c) detecting the presence or absence of a complex between said peptides and said antibodies;

d) optionally assaying the amount of said antibodies in the sample; wherein the presence of a complex between said peptides and said antibodies is indicative of a group O HIV-1 infection.

9 85 (previously presented): Immunoassay method for detecting a group O HIV-1 infection comprising the steps of:

a) obtaining a sample from a patient likely to contain anti-group O HIV-1 antibodies;

b) contacting a composition according to claim 80, 74 containing at least one synthetic peptide of formula (I), detectably labeled, with said sample:

c) detecting the presence or absence of a complex between said peptides and said antibodies; and

d) optionally assaying the amount of said antibodies in the sample;

wherein the presence of a complex between said peptides and said antibodies is indicative of a group O HIV-1 infection.

10 86 (previously presented): Diagnostic kit for the detection of group O HIV-1 specific antibodies comprising

a) a first container comprising at least one synthetic peptide of formula (I) according to claim 71 and

b) second container comprising appropriate means of detection of complexes between said antibodies and said peptide.

11 87 (previously presented): Diagnostic kit for the detection of group O HIV-1 specific antibodies comprising

a) first container comprising a composition according to claim 80 and

b) a second container comprising appropriate means of detection of complexes between said antibodies and said peptide.